Innovation and Science

Business Plan 1999-2000 to 2001-02 - *restated*

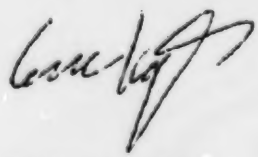
Accountability Statement

As a result of government re-organization announced on May 25, 1999, the Ministry Business Plans included in Budget '99 have been restated to reflect the new Ministry organizations as at November 17, 1999.

The restated Business Plan for the Ministry of Innovation and Science for the three years commencing April 1, 1999, was prepared in accordance with the Government Accountability Act and the government's accounting policies. All of the government's policy decisions as at February 23, 1999, with material economic or fiscal implications have been considered.

The Ministry's priorities outlined in the Business Plan were developed in the context of the government's business and fiscal plans. I am committed to achieving the planned results laid out in this Business Plan.

For information, the restated Business Plan includes 1999-2000 Second Quarter forecast information that reflects developments that have occurred during the 1999-2000 fiscal year.



Dr. Lorne Taylor
Minister of Innovation and Science
November 17, 1999

Message from the Minister

It is with great pleasure that I present the first Business Plan for the Department of Innovation and Science.

The creation of this ministry in May 1999 is a reflection of the Government's commitment to the sustainable prosperity of this province. By drawing together internal resources and functions related to the use of technology with all of its research and technology activities for the province, the Government is making a solid investment in the future of all Albertans.

I am proud to serve as the Minister for this new department, and am committed to ensuring that we will move ahead and invest in areas that will help secure a prosperous future for all Albertans in the new global economy.

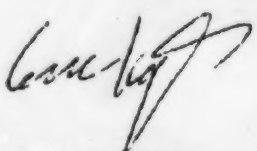
This business plan includes goals and strategies aimed at supporting activities in the research community in this province, and nurturing the innovative spirit that will make Alberta a prominent and recognized leader around the world.

One of the areas we are focusing on to secure the future is information and communications technology (ICT). The ICT sector currently employs 40,000 Albertans. Our goal through the ICT Strategy for Alberta is to help create 35,000 new jobs in this sector by the province's centennial in 2005.

The introduction and endorsement of the ICT strategy is strengthened by a major cross-government initiative directed at "Knowledge and Innovation" in Alberta's 1999/2002 business plan, and by the development of the government's first comprehensive Corporate Information Technology Business Plan. Other priorities for Innovation and Science and its reporting agencies and organizations for 1999/2002 include major initiatives and investments in life sciences and related technologies; as well as research activities in the sectors of agriculture, forestry and energy.

To that end, I am pleased to report that in 1999/2000, the Government will be increasing its overall investment in science and research activities by an additional $15 million. This investment demonstrates the province's belief that research will enable more significant work to be done by Albertans to help improve the economy and their quality of life at home, as well as for people around the world.

Innovation is the key to success in the 21st century. We want not only to nurture the entrepreneurial and innovative spirit inherent in all Albertans, but also to help create a framework to make that spirit thrive. This business plan represents an important milestone in our progress.



Dr. Lorne Taylor
Minister

Investigating a Brighter Future through Innovation and Science

The creation of the Department of Innovation and Science consolidates government's scientific research, development and application activities.

This strategic move brings the following entities "under one roof":

- Alberta Science, Research and Technology Authority (ASRA),
- Alberta Research Council (ARC),
- Alberta Oil Sands Technology and Research Authority (AOSTRA),
- Alberta Agricultural Research Authority (AARI),
- Information Management and Technology Services,
- Office of the Chief Information Officer,
- Information and Communications Technologies, and
- University Research and Grant Programs.

Innovation and Science is unique in its organizational make up. Department staff work closely with advisory boards whose representatives come from the private sector and academia. This structure allows for increased integration and efficiency of government research and development expenditures, technology commercialization and development of knowledge industries.

Introduction

Alberta's innovation system embodies not only research and development, but also the dissemination, commercialization and application of knowledge and technology. It includes human capital (people and skills), infrastructure, financial capital and a supportive business, social and political environment. The imaginative, creative people who create and apply knowledge in new ways to improve the quality of Alberta's economy, communities, and environment are the heart of the innovation system, which is composed of thousands of people working in hundreds of institutions and businesses across the province.

Growth and development of Alberta's innovation system is critical to the well being and future prosperity of this province. Government, universities, and private enterprises all play important roles in converting research and technology into products and services that produce socio-economic benefits for Albertans.

Our Vision

Alberta will be recognized locally and globally as a world leader in the development and application of science and technology that improves the well being and prosperity of its people and improves its communities and natural environment.

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Mission

To enhance the contribution of science, research, and information and communications technology to the sustainable prosperity and quality of life of all Albertans.

Our Core Businesses

1. Science and Research

Science and Research involves:

- managing and funding strategic investments in science and research,
- coordinating government science and research,
- providing strategic leadership for science and research in Alberta, and
- promoting science culture in Alberta.

2. Technology Business and Industry Growth and Development

- increasing the "knowledge industry" component of the Alberta economy by growing, attracting, and retaining firms, and
- increasing the application of technology throughout the economy.

3. Government Information Technology

Government Information Technology ensures that the Government of Alberta is exemplary in the efficient and effective use of information, and information and communications technology in providing services to Albertans:

- coordinating the effective use of computer technology, voice and data networks, information systems and records management within government,
- establishing cross-government policies and standards for information and communications technology (ICT) to improve the efficiency and flexibility of government,
- identifying, facilitating and providing cross-government solutions for ICT, and
- identifying and promoting best practices through cross-government initiatives.

Linkages to Government's Core Business and Goals

While Alberta's economy is still anchored to the traditional natural resource sectors of energy, agriculture and forestry, the new department of Innovation and Science will move to diversify the provincial economy — particularly in the information and communications technology sector. New technology and innovation will be the drivers for our economy. Working in conjunction with other government departments, Economic Development in particular, Innovation and Science will implement the economic development plan and strategy to ensure all Albertans have the opportunity to take their entrepreneurial spirit across the globe.

Innovation and Science is one of three lead departments working on the cross-government initiative "Knowledge and Innovation". This initiative will result in a strategic plan/framework for government and a report on the progress of government departments' support and promotion of innovation and science. This strategy will focus on building a strong infrastructure and a supportive environment in which the creation of knowledge and its innovative application are encouraged.

Science, research, and information and communications technology contribute to each of the three core businesses identified within the Alberta Government's Business Plan:

People
The well being of Albertans will be sustained through the innovative application of knowledge and technology.

Prosperity
Alberta's economy will be sustainable and competitive through innovation, creation and use of knowledge and technology.

Preservation
The well being of Alberta's communities and natural environment will be sustained through application of knowledge and technology.

Acronyms used in this business plan:

AOSTRA	Alberta Oil Sands Technology and Research Authority
ARC	Alberta Research Council
ASRA	Alberta Science, Research and Technology Authority
COURSE	Coordination of University Research for Synergy and Effectiveness
ICT	Information and Communications Technology
ILO	Industry Liaison Office (University of Alberta)
IMTS	Information Management and Technology Services
IT	Information Technology
MBA	Masters of Business Administration
R & D	Research and Development
UTI	University Technologies International (University of Calgary)
WEPA	Western Economic Partnership Agreement

Goal 1: Highly qualified workforce to support innovation and science.

Objectives

- Increase the number of knowledge workers in the Alberta economy.
- Maintain and enhance faculty and graduate student quality and research excellence at universities and teaching hospitals.
- Create 35,000 new jobs in the information and communications technology sector by 2005.

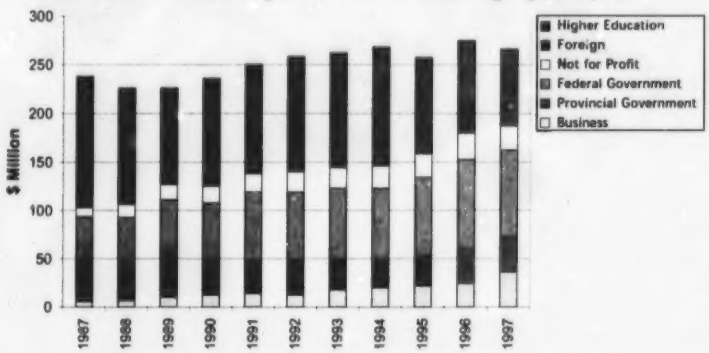
Strategies

- Support university efforts to attract and keep talented researchers in areas of identified strengths through the Research Excellence Envelope.
- Create an Alberta Centre of Research Excellence in ICT to attract internationally recognized researchers to Alberta institutions.
- In concert with key stakeholders, develop, launch and support COURSE (Coordination of University Research for Synergy and Effectiveness).
- Select and fund research proposals that offer potential to train young researchers.
- AOSTRA will work with industry and academia to develop a system for funding energy-related university research and development which meets industry's identified needs.

Key Performance Measures

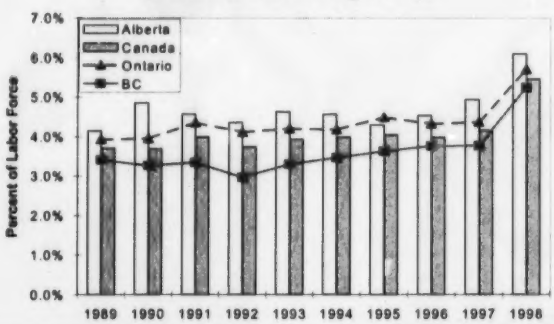
Total Sponsored Research Funding (overall and by source) - Develop a new measure to assess the ability of universities and teaching hospitals to attract research funding, as this is an indicator of the quality of their faculty and their research programs.

Alberta University Research Funding by Source



Scientists and Engineers - Scientists and Engineers play a critical role in the Innovation-Based economy as creators and implementors of the new ideas that result in new processes and new products.

Scientists and Engineers



Goal 2: Quality science, research, and information and communications technology infrastructure.

Objectives

- Maintain and enhance the excellence of Alberta's science and research infrastructure.
- Provide services and expertise that enable and support effective management and delivery of information, and information and communications technology within government.
- Promote the continued development of Alberta's ICT infrastructure.

Strategies

- Make strategic investments to help modernize the research infrastructure at Alberta universities and teaching hospitals through the Intellectual Infrastructure Partnership Program.
- Make strategic investments to help the research infrastructure through the Science and Research Fund.
- Provide reliable, cost-effective, province-wide information technology and shared network services.
- Continue to achieve overall savings to taxpayers by working with extended stakeholders to develop solutions for their telecommunication requirements.
- Leverage investment in the Alberta Research Council.
- Plan the development of an awareness package for Alberta businesses on how they can utilize electronic commerce to enhance competitiveness.
- Submit technology infrastructure "in schools" project to Community Development to celebrate Alberta's Centennial in 2005.
- Work with Economic Development and International and Intergovernmental Relations to identify potential provincial Western Economic Partnership Agreement (WEPA) projects to put forward for negotiation with the federal government.

Key Performance Measure

Develop a performance measure that considers the number of high-speed connections to schools, libraries and community centres. Develop a chart showing "initial hook up levels" and "permanent high speed connections" over time (actual and projected). Use results of survey products currently being fielded by Statistics Canada.

Goal 3: Internationally competitive science and research system.

Objectives

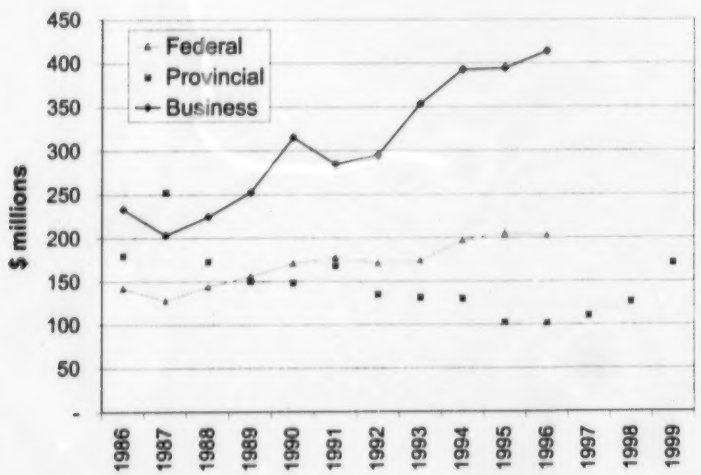
- Increase Alberta's ability to attract research and development (R & D) investment from national and international sources.
- Increase the investment in R & D from private and public sectors.

Strategies

- Continue to provide leadership in developing and refining a policy framework for our university research system.
- Maintain existing and create new, unique, leading edge and recognized R & D capacity at ARC.
- Increase investment by building partnerships and funding collaborative research through industry-led consortia.
- Promote increased R & D investment by the pharmaceutical industry in Alberta.
- Provide strategic leadership in interprovincial and national-level science and research matters through intergovernmental liaison.
- Promote growth of the biotechnology sector.
- Promote implementation of ASRA's ICT Strategy.
- Promote strategic coordination and enhancement of health research.
- Promote coordination of science and research initiatives among government departments including Greenhouse Gas Emissions, agriculture, forestry and energy.

Key Performance Measure

R & D Investment in Alberta by Source



Goal 4: Effective commercialization and adoption of science and technology.

Objectives

- Alberta will be the preferred location for technology development and business innovation in Canada.
- Increase commercialization and application of the results of R & D in Alberta.

Strategies

- Develop and promote network of UTI/ILO to actively encourage more companies to adopt new technologies.
- Promote the Alberta Advantage to attract venture capital investments to Alberta.
- Increase access to management and marketing assistance.
- Promote the use of electronic commerce among Albertans.
- Promote and leverage the technology commercialization networks established in Alberta to maximize results.
- Promote economic development through the commercialization of research in existing and emerging industries and encourage the direct application of research in relevant public and private organizations.

Key Performance Measures

Business Innovation - To remain competitive on a long-term basis, Alberta businesses need to cultivate an innovative culture. Develop a measure showing the degree of adoption of new technologies by Alberta firms, as this reflects their desire for innovation and their future competitiveness. Use results of survey products currently being fielded by Statistics Canada.

Value-Added Industries - Alberta's economy is still strongly resource-based. Expansion of Alberta's value-added industries will support more stable, long-term economic growth. Use results of survey products currently being fielded by Statistics Canada.

Goal 5: Effective application of science and research for improving stewardship of resources and environment.

Objectives

- Provide enabling technologies for sustainable development of energy resources.
- Provide enabling technologies for sustainable development of agriculture resources.

Strategies

- Invest to maintain capacity to deliver R & D to meet the needs of industry.
- Increase Alberta's role in the Greenhouse Gas management through Climate Change Central.
- Refocus, reorganize and build partnerships to stimulate energy-related research to address environmental concerns and reduce costs associated with energy development.

Key Performance Measure

Begin collection of baseline data on customer satisfaction and uptake of research.

Goal 6: Excellence in the development, delivery, and use of information, and information and communications technology in the delivery of government services.

Objectives

- Effective delivery of government programs through the innovative use of information and communications technology.
- Efficient delivery of government services through standardization, cross-government initiatives and/or outsourcing.
- Government demonstrates the effective use of information, and information and communications technology by adopting new technologies.

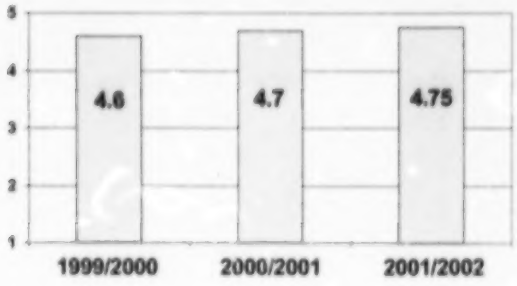
Strategies

- Lead information technology planning, standardization and ongoing development of a compatible, secure electronic information and communications infrastructure for government.
- Extend secure electronic commerce and information/mail exchange capabilities, to meet government ministry needs.
- Provide leadership and solutions to facilitate adoption of best ICT practices to increase the efficiency of the Alberta Government. For example, by supporting alternative service delivery mechanisms which can effectively reduce the cost of government services.
- Plan for the replacement of the current shared government mobile radio system.
- Assist ministries to ensure that investment in technology and ICT solutions is based on a full understanding of alternative choices, cost-benefit disciplines and wise investment choices.
- Research the appropriateness of outsourcing service delivery in specific ICT areas ensuring that benefits continue to be realized where outsourcing has been utilized.
- Continue to deliver projects and programs to enhance the ability of departments to manage recorded information regardless of media (electronic, paper or other).
- Implement data standards within the Alberta Government.

Key Performance Measures

Customer Satisfaction with IT Services - Survey of Customer Ministry Satisfaction with IT Services. The satisfaction scale used in these surveys is 1 to 6, with 6 being very satisfied. Our target for 1999/2000 is a customer satisfaction rating of 4.6. In 2000/2001, we are aiming for a rating of 4.7, and in 2001/2002, a rating of 4.75.

Customer Satisfaction with IT Services



New Measures - Develop new measures for:

- Efficiency objective,
- Use of data standardization by ministries,
- Use of data dictionary by ministries, and
- Customer satisfaction with Best Practices.

Infrastructure Reliability - An important and industry-standard measure of the reliability of computer processing services is the overall system availability. This is the percentage of time that Innovation and Science's enterprise computing systems are operational and available to the user, exclusive of planned maintenance. Previous system availability and future targets are shown in the table below.

Another measure of overall service reliability, similar to computer systems availability, is availability of the government's main voice and data telecommunications networks which interconnect government offices and facilities across the province.

Availability (%)	1995/96	1996/97	1997/98	1998/99	1999/2000	2000/01	2001/02	2002/03
Computer System								
Targets	98.50	98.50	98.50	98.50	99.50	99.50	99.50	99.50
Actuals	99.92	99.88	99.94	99.94				
Voice Network								
Targets	n/a	n/a	n/a	99.97	99.97	99.97	99.97	99.97
Actuals	n/a	n/a	n/a	99.98				
Data Network								
Targets	n/a	n/a	n/a	99.97	99.97	99.97	99.97	99.97
Actuals	n/a	n/a	n/a	99.98				

To support the shared environment, IMTS' role is to ensure that these and other systems are available for use. This table demonstrates IMTS' commitment to service excellence.

Goal 7: Albertans recognize benefits of innovation and science.

Objective

- Albertans understand the importance of science and research to their long-term prosperity and quality of life and support government investment in science and research.

Strategies

- Support and promote Science and Technology week.
- Support the science promotion efforts of public and private organizations that enhance the science and innovation culture in Alberta.
- Raise the science literacy levels of students and Albertans in general.
- Submit technology infrastructure "in schools" project to Community Development to celebrate Alberta's Centennial in 2005.

Key Performance Measures

Collect baseline data on student and parent perceptions of science and technology as a career choice.

Develop a new measure on public perception of benefits of innovation and science. Use appropriate comparators.

Goal 8: Lead and support the innovative and effective management of human resource capital within the Ministry.

Objectives

- Maintain and increase staff skill, talent and understanding of innovation and science.
- Innovation and Science staff will demonstrate exemplary use and management of science, research, and information and communications technology.

Strategies

- Continue to implement the government Human Resource Strategy.
- Provide cross-government leadership in the area of co-op programs, internship programs and MBA commercialization opportunities within the civil service.
- Develop a plan to ensure a positive work environment for employees including opportunities for development.

Key Performance Measures

Percentage of employees who understand how their work contributes to the Innovation and Science Business Plan. Set baseline measure.

Percentage of employees who are satisfied with their employment at Innovation and Science. Set baseline measure.

Development of supports and strategies for continuous learning.

Development of leadership continuity strategies for key positions.

Number of work experience, co-op and/or internship placements. Set baseline measure.

INNOVATION AND SCIENCE
MINISTRY INCOME STATEMENT
(thousands of dollars)

	Comparable 1998-99 Actual	Restated 1999-2000 Budget	1999-2000 Forecast	Restated 2000-01 Target	Restated 2001-02 Target
REVENUE					
Internal Government Transfers	7,722	47,190	45,785	47,180	47,180
Transfers from Government of Canada	1,738	50	50	50	50
Investment Income	1,127	210	210	190	190
Other Revenue	46,976	46,116	52,975	47,794	47,823
MINISTRY REVENUE	57,563	93,566	99,020	95,214	95,243
EXPENSE					
Program					
Ministry Services	3,969	3,900	3,900	4,000	4,100
Office of the Chief Information Officer	1,817	1,800	1,800	1,800	1,800
Information Technology Services	56,367	57,805	60,098	58,765	59,165
Research and Technology Commercialization	1,347	3,200	3,200	4,050	3,570
Agriculture and Life Sciences Research	12,877	11,945	11,255	10,852	10,760
Energy Research and Development	14,996	9,000	9,000	6,500	6,500
Contract and Grants Adminstration	45,494	52,283	51,283	52,768	52,748
Alberta Research Council Inc.	50,712	52,365	59,216	53,885	56,497
Valuation Adjustment	284	-	-	-	-
MINISTRY EXPENSE	187,863	192,298	199,752	192,620	195,140
Gain (Loss) on Disposal of Capital Assets	(63)	-	-	-	-
Write Down of Capital Assets	(1,034)	-	-	-	-
MINISTRY NET OPERATING RESULT	(131,397)	(98,732)	(100,732)	(97,406)	(99,897)

CONSOLIDATED NET OPERATING RESULT
(thousands of dollars)

	Comparable 1998-99 Actual	Restated 1999-2000 Budget	1999-2000 Forecast	Restated 2000-01 Target	Restated 2001-02 Target
Ministry Revenue	57,563	93,566	99,020	95,214	95,243
Inter-ministry consolidation adjustments	(30,879)	(69,220)	(68,815)	(69,800)	(69,800)
Consolidated Revenue	26,684	24,346	30,205	25,414	25,443
Ministry Program Expense	187,863	192,298	199,752	192,620	195,140
Inter-ministry consolidation adjustments	(30,181)	(28,280)	(28,565)	(28,870)	(28,870)
Consolidated Program Expense	**157,682**	**164,018**	**171,187**	**163,750**	**166,270**
Gain (Loss) on Disposal of Capital Assets	(63)	-	-	-	-
Write Down of Capital Assets	(1,034)	-	-	-	-
CONSOLIDATED NET OPERATING RESULT	(132,095)	(139,672)	(140,982)	(138,336)	(140,827)